REMARKS

Claims 65, 67, 68, 79-89, 91, 92, 96-99 and 113-145 are pending in this application. Claims 65, 67, 68, 79-89, 91, 92, 96-99 and 123-145 were withdrawn from consideration by the Examiner in view of the Applicants' response to the restriction requirement filed on 5/8/2007 and election of Group II (claims 113-122). In response, Applicants hereby cancel the withdrawn claims from this application without prejudice.

In the Office Action mailed August 9, 2007, the Examiner rejected claim 119 under 35 USC § 112. Specifically the Examiner requested clarification on the relationship between the module recited in claim 113 and the housing recited in claim 119. Applicants have amended claim 119 to clarify that the housing is an additional limitation to the module and not an element distinct from the module.

The Examiner rejected claims 113-115, 121 and 122 under 35 USC § 103(a). The Examiner cited "Sussman et al." (U.S. 5,155,019) in view of "Wrobel et al." (U.S. 3,831,030), "Noller" (U.S. 4,857,735) or "Veale" (U.S. 6,639,678), taken further in view of "Ahnell et al." (U.S. 4,073,691), "Wong" (U.S. 4,730,112) and "Allen" (Measurement Science and Technology) as the basis for this rejection.

Specifically, claim 113 and the claims dependent thereon (claims 114-122) recite a system with a plurality of lasers. Each laser emits radiation at a substantially single wavelength at which a target gas selected from the group consisting of O_2, CO_2, NH_3, H_2S and CH_4 absorbs radiation. At least one of the lasers emits radiation at a wavelength that is different from the wavelength at which a second laser emits radiation. Thus, claim 113 recites a system in which at least two lasers emit at two different wavelengths and each of the wavelengths is a target wavelength at which a selected gas absorbs radiation. The system further has a plurality of

detectors, each of which is capable of detecting radiation at the wavelength emitted by its associated laser. The system has a module with openings configured to receive sample containers, and the detectors are positioned such that a gas-containing portion of the container passes between the laser and the detector. As such, the containers are substantially optically transparent at the laser emission wavelength so that the detectors can detect at least a portion of the radiation emitted by the lasers.

Such a system is not obvious in view of Sussman et al. In fact, Sussman teaches away from the claimed solution. Sussman et al. describes the use of an FT-IR technique to detect the presence of CO_2 in a container. In Sussman et al., the container has a sterile growth medium. When a sample is introduced into the container, the container is monitored for CO_2, which is a byproduct of metabolic processes in the container. The Sussman et al. reference teaches that the wavelengths of interest for CO_2 detection are in a range of 4.35 microns to 4.17 microns (col. 4, ln. 36). This corresponds to the transparency window for the polymethylpentene containers described in Sussman (4.26 microns) (col. 4, lns. 61-62). Applicants have repeatedly stressed the difference between the wavelengths identified in Sussman et al. for CO_2 detection and the substantially single CO_2 absorption wavelength of 2.004 microns recited in claim 113 of the present application. Applicants have previously stressed the advantages of using this wavelength to detect CO_2 absorption, as opposed to the wavelength disclosed in Sussman et al.

Broadly, Sussman et al. teaches that neither plastic containers nor glass containers are suited for infrared spectroscopy. Sussman et al. actually teaches that it is unlikely for a plastic material to be suitably transparent in the infrared range of 0.4 micrometers to 4 micrometers. Sussman

et al. teaches one plastic (polymethylene pentene) with a suitable window of transparency at 2.349 micrometers. *See* Col. 4, ll. 58-64. Therefore, Sussman et al. clearly teaches away from the concept of a container with a wide range of optical transparency that would permit the use of a plurality of lasers that emit at different wavelengths to detect gases that absorb at distinct and different wavelengths. Sussman et al. teaches that plastic containers that are sufficiently optically transparent at infrared wavelengths other than 2.349 micrometers are not available.

Claim 113 expressly recites a sample container that is optically transparent at the emission wavelength of the plurality of lasers. As noted by the Examiner, none of the cited references disclose or suggest using a plurality of laser that emit at different wavelengths. The Examiner, however, contends that, "in the absence of a showing of criticality and/or unexpected results, when detecting for a plurality of different gas components with the culture vessel as suggested by the references of Sussman and Ahnell, it would have been obvious to one of ordinary skill in the art to provide a plurality of laser/detector pairs that correspond to the specific gas components to be detected for the known and expected result of eliminating the need to tune a single diode laser through a plurality wavelengths [sic] a facilitating the detection of the desired gas components." Applicants submit that the disclosure in Sussman et al provided above contradicts the Examiner's conclusion. Specifically, the container material described by Sussman et al. is optically transparent over an extremely narrow range of wavelengths in the UV spectrum. Sussman et al. therefore does not teach or suggest the possibility of using multiple lasers operating at a plurality of different wavelengths because the container taught by Sussman does not accommodate such an arrangement.

The Examiner cites Wrobel et al. and Noller and Veale for their description of tunable lasers for spectrophotometric analysis. However, none of these references teach or suggest the use of a plurality of lasers, each at a different wavelength, for the detection of a plurality of gases in a container, each gas absorbing at a different wavelength. Furthermore, neither Wrobel et al. nor Noller nor Veale disclose or suggest the need for a container that is optically transparent at this plurality of wavelengths. Therefore, none of Wrobel et al., Noller, or Veale make up for the deficiency in Sussman et al. with regard to Sussman et al.'s teaching away from a system that employs multiple lasers that emit at multiple wavelengths to detect the presence of more than one gas in the container. Sussman et al. constitutes a teaching away because it employs a container that is optically transparent at a very narrow range of wavelengths with no suggestion that the container be optically transparent at any wavelength other than the single wavelength of interest.

With regard to using lasers to detect the presence of gases other than CO_2, the Examiner cites Ahnell et al., Wong and Allen. However, none of these references disclose or suggest a system in which a plurality of gases are detected using a plurality of lasers, each of which emits at a different wavelength. Nor do these references overcome the deficiencies of Sussman et al., which expressly teaches the use of a container that is optically transparent at a very limited range of wavelengths and that suitable sample containers (especially plastic containers) do not have a wide range of optical transparency in the infrared spectrum. Sussman et al. therefore teaches away from the claimed system employing a plurality of lasers that emit radiation at a plurality of wavelengths to detect the presence of a plurality of gases in a sample container.

The express disclosure in Sussman et al. establishes that the claimed system in which a plurality of lasers is used to detect a plurality of gases that absorb at different wavelengths in a container that is sufficiently optically transparent at those wavelengths is clearly not obvious to one skilled in the art. One skilled in the art would take from Sussman et al. that such a system is not feasible or desirable due to the narrow range of wavelengths at which the containers in Sussman et al. are optically transparent. Consequently, claim 113 is not obvious in view of Sussman et al., even if Sussman et al. is combined with the teachings of the secondary reference. Applicants respectfully the Examiner to withdraw his obviousness rejection of claim 113.

The Examiner rejected claims 114 and 115 as obvious under 35 U.S.C. § 103(a). Claim 114 depends from claim 113 and specifies that the claimed laser is a monomodal, distributed feedback laser. The Examiner rejects this claim as an obvious choice. However, Applicants submit that claim 114 is not obvious due to its dependence from claim 113, which is not obvious for the above-stated reasons. The Examiner also rejects claim 115 as obvious, stating that the prior art tunable laser devices have the spectrography device set forth in claim 115. Again, Applicants submit that claim 115 is patentable from its dependence on claim 113, which is patentable for the reasons stated above. Applicants respectfully request the Examiner to withdraw his rejection of claims 114 and 115.

The Examiner also rejects claims 121 and 122 as obvious. Applicants submit that the features of the system recited in these claims are patentable in the context of the system set forth in claim 113 upon which claims 121 and 122 depend. Applicants respectfully request the Examiner to withdraw his rejection of claims 121 and 122.

The Examiner rejects claims 119 and 120 as obvious under 35 USC § 103(a). The Examiner cites Sussman et al. in view of Wrobel et al. or Noller or Veale taken further in view of Ahnell, Wong, Allen and "Berndt et al." (5,518,923). Claim 119 recites the system of claim 113 in which the module is further equipped with a housing with an interior portion having the plurality of openings that receive the containers and move the housing into proximity to the plurality of lasers and detectors. Claim 120 further describes the housing as circular wherein the housing interior rotates to move the containers proximate to the laser and detectors. Berndt et al. describes a turntable with a plurality of wells for receiving sample containers. Berndt et al. also describes a plurality of sensors that are used to interrogate the chemical sensor at the bottom of the containers as they rotate past. However, Berndt et al. does not disclose or suggest the system of claim 113 that requires that containers be interposed between a laser and its associated sensor for analysis. Thus the claimed arrangement of lasers and detectors recited in claims 119 and 120 are not obvious in view of Berndt et al. Furthermore, Applicants submit that claims 119 and 120 are patentable by virtue of their dependence on claim 113. The Examiner is respectfully requested to withdraw his rejection of claims 119 and 120.

The Examiner has objected to claims 116 to 118 but has indicated that these claims are allowable if rewritten in independent form. The Examiner is thanked for his favorable disposition with regard to these claims. While the Applicants have traversed the Examiner's rejections with regard to claim 113 and the claims that depend therefrom, Applicants have added new claim 146, which is claim 116 rewritten in independent form. Claim 116 is canceled. Claims 117 and 118 have been amended to depend from new claim 146. Applicants make this amendment simply to streamline prosecution going forward and to

segregate claims deemed allowable by the Examiner. These amendments are not made for purposes of patentablity.

As it is believed that all of the rejections set forth in the Official Action have been fully addressed, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he/she telephone Applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: November 9, 2007

Respectfully submitted,

By ______________________

Richard J. Botos
Registration No.: 32,016
LERNER, DAVID, LITTENBERG,
KRUMHOLZ & MENTLIK, LLP
600 South Avenue West
Westfield, New Jersey 07090
(908) 654-5000
Attorney for Applicants

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